

Amendments To The Claims

*Please amend applicant's claims, without prejudice, to read as follows:*

1. (Currently Amended) An apparatus for regulating fluid flow through a spray nozzle, said apparatus comprising:

(a) a circular chamber defined by spaced apart end walls;

(b) a peripheral side wall;

(c) a central axis;

(d) an inlet at or near said peripheral side wall to allow a flow of fluid to enter said chamber substantially tangential to said peripheral side wall;

(e) an outlet exiting through one of said end walls wherein in use a flow of fluid entering through said inlet has a primary lower layer that substantially follows a first circular flow path which forms a vortex commencing at or near said peripheral side wall and increases in velocity and pressure towards said outlet; and

(f) at least one secondary upper layer that substantially follows a second flow path radially inwardly towards said central axis, wherein said primary lower layer and said secondary upper layer interact at their boundaries and support each other in a non-destructive manner from peripheral side wall to said outlet.

2. (Original) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 1, wherein said second flow path of said secondary upper layer is generated by means for generating an inwardly radial flow.

3. (Original) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 2, wherein said apparatus comprises a disc engagable with a spray nozzle housing that in combination define said circular chamber, and one of said spaced apart end walls and said peripheral side wall of said circular chamber form part of said disc, and said means for generating an inwardly radial flow is a narrow annular gap between said disc and said housing, said annular gap being disposed radially outwardly relative to said peripheral side wall.

4. (Original) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 3, wherein the volume of said annular gap is fixed.

5. (Previously Presented) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 3, wherein the volume of said narrow gap is adjustably varied by movement of said disc relative to said spray nozzle housing along said centrally located housing.

6. (Original) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 1, wherein said outlet is located at or near said centrally located axis.

7. (Previously Presented) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 1, wherein said inlet is a plurality of inlets.

8. (Previously Presented) An apparatus for regulating fluid flow through a spray nozzle as claimed in claim 7 wherein said apparatus is a shower head.

9. (Original) An apparatus for regulating fluid flow as claimed in claim 3 wherein the one of said spaced apart end walls that forms part of said disc has a substantially flat portion.

10. (Original) An apparatus for regulating fluid flow as claimed in claim 3 wherein the one of said spaced apart end walls that forms part of said disc has at least one substantially curved portion.

11. (Original) An apparatus for regulating fluid flow as claimed in claim 1 wherein said apparatus is used to mix different fluids.